

**REMARKS**

This Amendment is submitted in response to the final Office Action mailed on September 20, 2004. Claims 1 and 7 have been amended, and claims 11-19 stand withdrawn in response to a Restriction Requirement raised by Examiner. Claims 1-10 remain pending in the present application. In view of the foregoing amendments, as well as the following remarks, Applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration of the application in this regard.

Claims 1, 2, 4-7, 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al., U.S. Patent No. 6,391,387 in view of Hynes et al., U.S. Patent No. 6,132,809. Claims 1, 2, 4-7, 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hynes et al. in view of Rutledge et al. Claims 3 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al. and Hynes et al. or Hynes et al. and Rutledge et al. in view of the Anorad Brochure. Lastly, claims 5, 6, 9 and 10 stand alternatively rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al. and Hynes et al. or Hynes et al. and Rutledge et al. in view of Ng, U.S. Patent No. 5,820,623. While Applicant respectfully traverses these rejections, Applicant has amended each of independent claims 1 and 7 to more sharply define the present invention over the prior art of record and respectfully request that the rejections be withdrawn.

In particular, each of independent claims 1 and 7 has been amended to recite that the liquid dispensing head is operatively connected to the support member and capable of linear movement relative to the support member along a second axis parallel to the first axis "in response to" contact of the liquid dispensing head with the substrate. Independent claim 1 has further been amended to recite that the linear displacement sensor is operatively connected to the support member and the liquid dispensing head with the linear displacement sensor being capable of generating a signal that indicates a sense displacement of the liquid dispensing head relative to the support member "in response to contact of the liquid dispensing head with the substrate". Independent claim 7 has further been amended to recite that the linear encoder is operatively connected to the support member and the liquid dispensing head, and coupled to the robotic control mechanism, with the linear encoder being capable of applying the signal to the robotic control mechanism that indicates a sense displacement of the liquid dispensing head relative to the support member "in response to contact of the liquid dispensing head with the substrate".

In Applicant's claimed invention as recited in independent claims 1 and 7, and claims depending therefrom, the liquid dispensing head is mounted for linear movement relative to the support member in response to contact of the liquid dispensing head with the substrate. The linear displacement sensor (claim 1) or linear encoder (claim 7) is used to sense the displacement of the liquid dispensing

head relative to the support member to thereby control movement of the support member toward the substrate. The use of the linear displacement sensor or linear encoder in the floating head dispenser of the present invention ensures that the dispensing head is properly positioned in contact with the substrate without applying too much force that might otherwise damage the substrate.

In contrast, neither dispensing head of Rutledge et al. nor Hynes et al. contacts its respective substrate during a dispensing operation. This is evident from Fig. 4 of Rutledge et al. which clearly shows the dispensing gun does not contact the closure member (100) and from Figs. 6 and 7 of Hynes et al. which show the tips of the dispensing guns spaced-apart from the substrate. The dispensing guns of Rutledge et al. and Hynes et al. are therefore not mounted for linear movement in response to contact of the respective dispensing guns with their respective substrates as claimed by Applicant.

Rather, in the dispensing system embodiment of Fig. 19 of Rutledge et al., the dispensing gun pivots about the axis "G-G" in response to linear movement of the support and drive assembly (630). This pivotal movement of the Rutledge et al. dispensing gun is not in response to contact of the dispensing gun with the substrate as claimed. In Hynes et al., the dispensing gun is mounted for linear movement in response to operation of the end effector (26) (on the ball screw slide 38) and the linear pneumatic slide (60). This movement of the dispensing gun in

Hynes et al. is also not in response to contact of the dispensing gun with the substrate as claimed.

In view of the above, Applicant respectfully submits that the hypothetical combination of Rutledge et al. and Hynes et al. fails to achieve Applicant's claimed invention as recited in each of independent claims 1 and 7 and the rejections should be withdrawn. Moreover, as claims 2-6 and 8-10 depend from allowable independent claims 1 and 7, respectively, and further as each of these claims recites a combination of elements not taught or suggested by the prior art of record, Applicant submits that these claims are allowable as well.

#### **Conclusion**

In view of the foregoing response including the amendments and remarks, this application is submitted to be in complete condition for allowance and early notice to this effect is earnestly solicited. If there is any issue that remains which may be resolved by telephone conference, the Examiner is invited to contact the undersigned in order to resolve the same and expedite the allowance of this application.

Applicant does not believe that this response requires that any fees be submitted, however, if any fees are deemed necessary, these may be charged to Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.



David H. Brinkman, Reg. No. 40,532

2700 Carew Tower  
441 Vine Street  
Cincinnati, Ohio 45202  
(513) 241-2324 - Voice  
(513) 421-7269 - Facsimile